

THE NEW RSST

Warm up using the SWU, and then carry out the following movements:

(1) One-Leg Squats: 2 sets of 7 reps on each leg with just body weight for resistance, with a short break between sets (maintain good posture as you squat, don't lean forward with upper body, let torso descend during squat until hip of squatting (support) leg is on level with knee – and then straighten leg and return to starting position; toes of rear foot should be balanced on step or bench behind you, with no weight-bearing on rear foot; during each squat, knee of non-support, rear leg should descend downward toward a line perpendicular to support-foot's heel)

(2) Runner's Poses: 15 poses with each leg. To carry out this exercise, stand relaxed and with erect body posture, with your feet placed on either side of an imaginary midline running down through your body. Then, swing your right thigh ahead and upward until it is just above its parallel-with-the-floor position (your right leg should be flexed at the knee as you do this, so that the lower part of the right leg should be pointing almost directly at the ground, i. e., it should be nearly perpendicular with the ground). Full body weight is supported by your left foot as you do this. As you swing your right thigh ahead and up, simultaneously bring your left arm forward, as you would during a normal running stride. In your support (left) leg, the hip, knee, and ankle should all be slightly flexed. Hold this "right-thigh-up" position for a few seconds, while maintaining relaxed stability and balance, and then bring your right foot back to the ground and your left arm back to a relaxed position at your side. That completes one "pose," or rep. Perform 14 more pose reps with your right thigh swinging upward, and then switch over to your left leg (your right leg will now be the supporter of your entire body weight) for 15 poses. As you become stronger and more skilled and coordinated, speed up the thigh-lift move or resist it with the use of a medium- to high-resistance stretch cord.

(3) Toe-Walking with Opposite-Ankle Dorsiflexion: 2 sets of 20 meters, with a short break between sets. Stand as tall as you can on your toes. Balance for a moment, and then begin walking forward on your toes with slow, small steps (take one step every one to two seconds, with each step being about 10 to 12 inches in length). As you do this, maintain a tall, balanced posture. Be sure to dorsiflex the ankle and toes of the free (moving-ahead) leg upward as high as possible with each step (i. e., move the top and toes of the "swing" foot as close to the shin as possible), while maintaining your balance on the toes and ball of the support foot.

(4) Lunges with Balance-Challenging and Core-Building Ball Movement: 10 reps on each leg. Please stand in a running-ready position, with your feet pointed straight ahead and shoulder-width apart. Your ankles, knees, and hips should be very lightly flexed, and your abs and buttocks should be slightly tightened, pulling the bottom of your pelvis forward. Your shoulders should be relaxed and down, not held forward. Hold a ~ 10-pound medicine ball in your hands. Then, take a long step forward with your left foot, landing in the mid-foot area and quickly yet smoothly going into a lunge squat until your left thigh is parallel with the ground. As you do this, your right foot will rock up onto its toes; preserve this lunge and toe-on-the-ground position, and use your right foot only for balance, not for weight-bearing. Hold the medicine ball by the outside of your left hip, and then with a very smooth action lift the medicine ball up, forward, and to the right, so that the ball ends up higher than your right shoulder and well in front of your right shoulder (and actually a little to the right). Your arms will be straight and inclined upward and outward by about 45 degrees from your trunk. This diagonal swing upward is strengthening for your core and upper body and is also de-stabilizing to the lunge position, so try to preserve your lunge position and the stability of your trunk as you carry out the movement. Once the medicine ball has reached its apogee, return it smoothly to the outside of your left hip to complete one rep.

Complete 10 reps in this way, and then change the lunge position, now lunging forward with your right foot and holding the lunge stance with the right foot as the support, forward foot but otherwise repeating the basic movement for 10 repetitions (this time the ball will be held outside the right hip and will be thrust forward, up, and to the left). This exercise is great for leg strength and balance, but it also helps runners build their core strength in a running-specific way and thus makes their upper bodies more stable during running. The result is improved speed and economy.

(5) Balance and Eccentric Reaches with Toes: 3 X 10 reps (that is, 10 straight ahead, 10 lateral, and 10 medial) with each foot. To carry out this exercise correctly, start by standing on only your right foot as you face a wall or other structure, with the toes of your right foot about 30 inches or so from the wall (you may need to adjust this distance slightly as you perform the exercise). Your left foot should be off the ground and positioned toward the front of your body, with your left leg relatively straight. Then, bend your right leg at the knee while maintaining your upper body in a relatively vertical position, nearly directly over your right foot. As you bend your right leg in a squatting movement, move your left toes (and left foot, of course) toward the wall until your left toes actually touch the wall, keeping your left leg relatively straight. End the movement by returning to the starting position. Repeat this straight-ahead movement 10 times. Then, conduct essentially the same motion, but move your left foot forward and to the left (diagonally, laterally), again keeping your left leg straight as you attempt to make contact with the wall; as you do this, control your right, weight-bearing foot so that it does not roll sharply to the inside. Note that your left foot may not quite reach the wall, since you are moving in a frontal plane (from right to left) in addition to the straight-ahead, sagittal plane. Repeat this diagonal-left movement 10 times. After the 10th rep, return to the starting position, and then carry out essentially the same motion, but with your left foot crossing over the front of your body medially and going to the right as you attempt to touch the wall; as you do this, control your right foot and right ankle so that the right foot does not roll significantly to its outside edge. When you return to the starting position, you have completed one medial rep on your right foot – complete 10 medial reps in all. **Throughout this entire exercise, keep your upper body erect and relaxed – don't lean backward or to one side or the other with your torso; you should continue standing tall, facing the wall, as you do each rep in all three versions (straight, lateral, medial). Make sure that your support foot is also pointing directly toward the wall. Once you have completed a full set (with 30 reps) on the right foot, complete a full set with your left foot as the weight-bearing foot and the right foot as the trotter which is moving toward the wall, first straight ahead for 10 reps, then laterally for 10 reps, and then medially for 10 reps.**

(6) Wall Shin Raises: 2 sets of 50 reps, plus 2 sets of 50 “pulses.” To perform this exercise, simply stand with your back to a wall, with your heels about the length of your feet away from the wall. Then, lean back until your buttocks and shoulders rest against the wall. Next, dorsiflex both ankles simultaneously, while your heels remain in contact with the ground. Bring your toes as far toward your shins as you can, and then lower your feet back toward the ground, but do not allow your forefeet to actually touch the ground before beginning the next repeat. Simply lower them until they are close to the ground, and then begin another repetition. Once you have finished the 50 reps, maintain your basic position with your back against the wall, dorsiflex your ankles to close to their fullest-possible extent, and then quickly dorsiflex and plantar-flex your ankles 50 times over a very small range of motion (smaller than the full range you use for the basic reps; emphasize quickness as you do this). These short, quick ankle movements are called “pulses.”

(7) High-Bench Step-Ups: 1 set of 10 reps on each leg using body weight for resistance. Begin from a standing position on top of a six- to eight-inch-high bench or step, with your body weight on your left foot and your weight shifted toward your left heel. Your right foot should be free and held slightly behind your body. Lower your body in a controlled manner until the toes of your right foot touch the ground, but continue to support all of your weight on your left foot. Then, push downward on the bench or step with your **left** foot and straighten your left leg; as you do this swing your right leg upward and

forward until your right thigh is parallel with the surface of the bench or step (similar to the stance you adapted when doing the “runner’s poses”). As your right thigh swings upward, your right leg should be bent at the knee, and your left arm should swing forward naturally as your right leg swings up and ahead. Hold the right-thigh-up position for a moment (completing one rep), and then slowly and smoothly lower your right toes to the ground behind the bench or step, starting your second repetition. Continue in this manner for the prescribed number of reps, and then switch over so that your body weight is supported on your right leg as you complete the required reps. Maintain upright posture with your trunk throughout the whole movement. Sustain good control of your body as you lower your foot behind the bench – don’t lean forward with your torso. The foot which is being lowered behind the bench should lightly touch the ground behind the bench – it is not used for weight-bearing at all. The foot is lowered not by reaching for the ground, but by squatting with the weight-bearing (other) leg.

(8) Bicycle Leg Swings with Stretch Band: 2 sets of 40 reps for each leg. To perform these swings, stand with your weight fully supported on your left leg (initially, you may place your right hand on a wall or other support to maintain balance). Begin by flexing your right hip and raising your right knee up to waist height (your right thigh should be parallel with the ground); as you do this, your right knee should be flexed to 90 degrees or more. Once your thigh is parallel to the ground, begin to extend your right knee (swing the lower part of your right leg forward, unflexing the knee) until your knee is nearly fully extended (your leg is nearly straight), with your right thigh still parallel to the ground. As your right knee nears full extension, allow your right thigh to drop downwards and backwards until the entire thigh and leg are extended behind your body (as if you were following through on a running stride). Your right knee should be near full extension (your leg should be basically straight) until it reaches the peak of the backswing. As your right hip nears full extension (as you approach the end of the backswing), raise your right heel by bending your right knee; your heel should move closely towards your buttocks as you do this. As this happens, move your right knee forward until it returns to the appropriate position in front of your body, with your right thigh parallel to the ground. Repeat this entire sequence of actions in a smooth manner such that the hip and leg move through a continuous arc without stopping or pausing.

Once you are able to coordinate the movement, strive to perform the swings at a cadence of about 12 swings every 10 seconds or so (slightly faster than one swing per second). After you have achieved coordination of the basic action, a strong stretch cord should be attached to your “swing” (non-support) ankle at one end and a firm post, table leg, fence, railing, or other structure (at roughly knee height) at the other end. Stand facing the post, table leg, fence, or railing, with enough distance between you and the structure so that the stretch cord significantly accelerates your leg forward during the forward-swing phase of the exercise. This enhanced forward acceleration will put your hamstrings under stress – and will ultimately be very strengthening for your hams.

(9) Reverse Bicycle Leg Swings with Stretch-Band Resistance: 2 sets of 40 reps with each leg. This exercise is exactly like the regular bicycle leg swings, except that you are facing *away* from the attachment point (fence, railing, etc.) for the stretch cord. The cord then *resists* forward leg swing, instead of enhancing it.

(10) One Set of Partial Squats: Stand with your left foot directly under your left shoulder, keeping your left knee just slightly flexed and maintaining relaxed, upright posture. Hold a light bar (initially with no weight attached) so that it rests on the top-back of your shoulders, just behind your neck; you may incline your upper body just slightly forward for balance. Most of your body weight should be directed through the mid-portion of your left foot. Your right leg should be flexed at the knee so that the foot is not touching the ground at all – your right foot is literally suspended in air (however, you may occasionally need to “spot-touch” the floor with your trailing leg for balance as you complete this exercise).

From this basic position, if you were carrying out a traditional one-leg squat you would ordinarily bend your left leg at the knee and lower your body until your left knee reached an angle of about 90 degrees between the backs of your thigh and lower leg (usually, at this point your thigh would be almost parallel with the ground). However, for the partial squat you should just go down about half-way, so that the angle between the back of your thigh and lower leg is about 135 degrees or so. Then, return to the starting position, maintaining upright posture with your trunk. That's one rep!

Continue in the manner described above until you have completed 10 reps (10 partial squats). Then, without resting, descend into the 11th partial squat, but instead of immediately rising upward hold the partial-squat position (the 135-degree position) for 10 full seconds. We'll call your body alignment during this 10-second period the "static-hold" position.

After completing 10 seconds in the static-hold position, immediately – without resting – rattle off 10 more reps, maintain a static hold for 10 seconds again, hit 10 more reps, and then hold statically (if you can) for 10 seconds. That's one set!

To summarize, a set proceeds as follows (with no recovery at all within the set):

- (A) 10 partial squats
- (B) 10 seconds of holding your leg and body in the down position
- (C) 10 partial squats
- (D) 10 seconds of holding
- (E) 10 partial squats
- (F) 10 seconds of holding

Once this set is completed, carry out a similar set on your right leg.

If you can complete a full set on each leg without having to stop, you may then add additional weight to the bar, using 5- to 10-pound increments. You may continue to add weight (for subsequent workouts) each time you are able to complete a set on each leg without major problems.

ITB Insurance: 1 set of 10 reps on each leg. Stand "sideways" on an eight-inch step on your left foot only. Your left foot should be lined up, parallel with the front edge of the step and about an inch away from the edge, and your right foot should be dangling free, directly over the eight-inch "drop" to the next-lower step or ground. Your body should be in a running-ready position, with good posture and just very light flexion of your left hip, knee, and ankle. Now, the key preparation: Rotate your left foot inward about 45 degrees; this may make the toes go slightly over the edge of the step, but that is ok. Maintain your straight-ahead position with your body; it is only the left leg and foot which are rotated inward. Now, while continuing to maintain that straight-ahead position and while looking ahead, go into a nice squat with your left leg, simultaneously deeply flexing your left hip, knee, and ankle. Keep your torso pretty erect as you squat; don't lean forward, twist, or bend from side to side. Squat deeply enough so that the toes of your free, right foot, lightly touch the ground (but don't put any weight on that right foot). Don't reach with your right foot – get the right toes to the ground by squatting deeply enough on the left leg. Once the right toes have touched, unflex your left hip, knee, and ankle and return to the starting position (your left foot will remain turned inward by 45 degrees as you ascend). That's one rep!

Complete nine more reps on your left leg, and then turn the other way on the step so that you can complete 10 reps on your right leg. Of course, your right foot will now be rotated inward (i. e., toward the edge of the step) for the right-leg reps, and your left foot will be the descending one. *You know you are doing this exercise correctly when you feel a strain in your ITB as you squat.*

Key Points about the Running-Specific Exercises

When carrying out these running-specific exercises, try to maintain – as much as possible – a feeling that you are actually running. Don't tense your upper body and gaze downward at your legs as you exercise (you wouldn't do that while running). Also, perform the exercises rhythmically and smoothly, not with choppy timing and movements.